REPORT OF TAR AND NICOTINE CONTENT OF THE SMOKE OF 118 VARIETIES OF CIGARETTES

May 18, 1970

The Federal Trade Commission's laboratory has determined the tar (dry particulate matter) and total alkaloid (reported as nicotine) content of 118 varieties of cigarettes. The laboratory utilized the Cambridge filter method with the following specifications as set forth in the Commission's announcement of July 31, 1967:

1. Smoke cigarettes to a 23 mm. butt length, or to the length of the filter and overwrap plus 3 mm. if in excess of 23 mm.,

2. Base results on a test of 100 cigarettes per brand, or type,

3. Cigarettes to be tested will be selected on a random basis, as opposed to "weight selection",

4. Determine particulate matter on a "dry" basis employing the gas chromatography method published by C. H. Sloan and B. J. Sublett in Tobacco Science 9, page 70, 1965, as modified by F. J. Schultz' and A. W. Spears' report published in Tobacco Vol. 162, No. 24, page 32, dated June 17, 1966, to determine the moisture content,

5. Determine and report the "tar" content after subtracting moisture and alkaloids (as nicotine) from particulate matter.

Concerning the 118 varieties tested, 28 were capable of being smoked to 23 mm. or to an average range of between 23 and 24 mm. The butt lengths of the other 90 varieties tested ranged from 23 mm. to an average of between 34.5 and 37.0 mm. The butt lengths of 36 of the 118 varieties tested exceeded 30 mm.

The samples used were obtained by attempting to purchase two packages of each variety of cigarettes during December of 1969 and January of 1970 in each of 50 geographic locations throughout the country. All varieties of cigarettes were not available in each of the 50 geographic locations and in these instances, one or more additional packages of cigarettes were purchased in those geographic locations where the respective varieties were available. The samples utilized in the tests were representative of the 118 varieties of cigarettes as available throughout the country at the time of purchase.

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In the interest of scientific accuracy the tar content is reported to the nearest 1/10 milligram and the nicotine to the nearest 1/100 milligram, each with appropriate statistical values, in the table in which varieties are listed in alphabetical order. In the two tables which respectively list varieties in increasing order of tar values and in increasing order of nicotine values, and in two lists tabulating the current and four previous tests, the average weight and butt length columns have been eliminated; types of cigarettes are more clearly described; tar figures have been rounded off to whole numbers and nicotine figures to tenths of milligrams; and figures representing the standard deviation of the mean have been eliminated. Accordingly, tar and nicotine figures in these tables and lists represent rounded off averages without indication of their precision.

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"Tar"[4] and Nicotine[5] Content of One-hundred eighteen (118) Varieties of Domestic Cigarettes

	Name	Type[1]		Average weight[2]	Butt length[3]	TPM dry[4]	Nicotine[5]
1	Alpine	F, M, SP	85 mm	1.0628	29 - 30.5 mm	18.5 ± 0.3	1.13 ± 0.02
2	Belair	F, M, SP	85 mm	0.9879	26.5 - 29.5 mm	18.1 ± 0.3	1.35 ± 0.03
	Belair	F, M, SP	100 mm	1.1362	32 - 34 mm	18.8 ± 0.4	1.35 ± 0.05
3	Benson & Hedges	F, HWP	70 mm	0.8831	26 mm	19.4 ± 0.5	1.39 ± 0.03
	Benson & Hedges	F, HWP	85 mm	1.0568	26 - 30 mm	19.9 ± 0.5	1.44 ± 0.04
	Benson & Hedges	F, SP	100 mm	1.1987	26 - 34.5 mm	20.3 ± 0.4	1.38 ± 0.02
	Benson & Hedges	F, M, SP	100 mm	1.1915	34.5 - 37 mm	20.6 ± 0.5	1.36 ± 0.03
4	Bull Durham	F, SP	85 mm	1.1986	25.5 - 28 mm	20.4 ± 0.5	1.74 ± 0.04
5	Camel	NF, SP	70 mm	0.9533	23 mm	24.1 ± 0.5	1.92 ± 0.04
	Camel	F, SP	85 mm	1.0609	29 - 30 mm	20.3 ± 0.4	1.29 ± 0.03
6	Carlton[6]	F, SP	70 mm	0.8535	32.8 - 33.5 mm	1.9 ± 0.2	0.15 ± 0.01
7	Carlton	F, SP	85 mm	1.0312	32.5 - 35 mm	4.2 ± 0.2	0.32 ± 0.03
	Century	F, SP	100 mm	1.2361	32.8 - 34 mm	20.4 ± 0.5	1.27 ± 0.05
8	Chesterfield	NF, SP	70 mm	0.9568	23 mm	24.5 ± 0.4	1.33 ± 0.03
	Chesterfield	NF, SP	85 mm	1.1316	23 mm	28.5 ± 0.5	1.66 ± 0.03
	Chesterfield	F, SP	85 mm	1.0352	28.2 - 29.5 mm	21.2 ± 0.5	1.42 ± 0.04
	Chesterfield	F, M, SP	85 mm	1.0257	26.5 - 28.1 mm	18.6 ± 0.3	1.07 ± 0.02
	Chesterfield	F, SP	101 mm	1.2401	29.5 - 31.5 mm	21.3 ± 0.4	1.46 ± 0.05
9	Domino	NF, SP	85 mm	1.2500	23 mm	24.4 ± 0.6	1.11 ± 0.04
	Domino	F, SP	85 mm	1.1458	23 - 25.6 mm	21.7 ± 0.5	1.01 ± 0.03
	Domino	F, M, SP	85 mm	1.1340	23.5 - 25.1 mm	17.5 ± 0.5	0.98 ± 0.04
10	Doral	F, SP	85 mm	1.1550	32.7 - 33.7 mm	13.6 ± 0.5	0.86 ± 0.04
	Doral	F, M, SP	85 mm	1.1565	32 - 33.7 mm	14.3 ± 0.5	0.96 ± 0.05
11	Duke	F, SP	85 mm	1.1619	32.6 - 34 mm	9.8 ± 0.3	0.33 ± 0.03
12	DuMaurier	F, HWP	85 mm	1.0475	26.7 - 29.6 mm	18.2 ± 0.5	1.26 ± 0.04
13	English Ovals	NF, HWP	70 mm	0.9843	23 mm	25.9 ± 0.8	1.89 ± 0.06
	English Ovals	NF, HWP	85 mm	1.2084	23 mm	28.8 ± 0.7	2.23 ± 0.07
14	Patina	NF, SP	85 mm	1.1958	23 mm	31.1 ± 0.8	1.79 ± 0.08
15	Frappe	F, M, SP	85 mm	1.1018	25.5 - 28 mm	10.7 ± 0.6	0.35 ± 0.03
16	Galaxy	F, SP	85 mm	1.1529	27.1 - 29.6 mm	20.6 ± 0.4	1.39 ± 0.04
17	Gauloises Caporal	NF, SP	70 mm	1.0002	23 mm	21.7 ± 0.5	1.66 ± 0.05
	Gauloises Disque Bleu	F, SP	70 mm	1.0595	23 - 23.9 mm	23.9 ± 0.8	1.08 ± 0.07
18	Half & Half	F, SP	85 mm	1.1521	26.0 - 27.5 mm	23.6 ± 0.5	1.56 ± 0.04
19	Herbert Tareyton	NF, SP	85 mm	1.1169	23 mm	26.7 ± 0.7	1.67 ± 0.04
20	Home Run	NF, SP	70 mm	0.9025	23 mm	19.7 ± 0.5	1.45 ± 0.04
21	Kent	F, SP	70 mm	0.8787	26.5 - 29 mm	9.6 ± 0.4	0.54 ± 0.03
	Kent	F, HP	80 mm	0.9889	27.3 - 28.4 mm	19.3 ± 0.4	0.97 ± 0.04
	Kent	F, SP	85 mm	1.0313	27 - 28.2 mm	16.1 ± 0.4	0.96 ± 0.03
	Kent	F, SP	100 mm	1.2200	32 - 33.5 mm	19.1 ± 0.5	1.16 ± 0.03
22	King Sano	F, SP	85 mm	1.1409	28 - 29.3 mm	5.4 ± 0.5	0.18 ± 0.02
	King Sano	F, M, SP	85 mm	1.1502	26.8 - 29.5 mm	6.5 ± 0.5	0.22 ± 0.01
23	Kool	NF, M, SP	70 mm	0.8910	23 mm	20.4 ± 0.6	1.31 ± 0.05
	Kool	F, M, SP	85 mm	0.9584	27.5 - 28.7 mm	17.6 ± 0.5	1.33 ± 0.04
	Kool	F, M, SP	100 mm	1.1210	32.5 - 35 mm	19.6 ± 0.4	1.45 ± 0.04
24	L & M	F, SP	70 mm	0.8891	23 - 24.5 mm	16.6 ± 0.4	0.92 ± 0.03
	L & M	F, HP	80 mm	0.9718	26.7 - 27.5 mm	17.6 ± 0.5	1.01 ± 0.03
	L & M	F, SP	85 mm	1.0192	26.9 - 27.8 mm	19.1 ± 0.3	1.12 ± 0.03
	L & M	F, SP	100 mm	1.2183	29 - 31 mm	19.0 ± 0.3	1.11 ± 0.02
	L & M	F, M, SP	100 mm	1.2178	29 - 32 mm	19.1 ± 0.4	1.18 ± 0.02
25	Lark	F, SP	85 mm	1.1770	26.5 - 27.3 mm	17.2 ± 0.5	1.00 ± 0.05
	Lark	F, SP	100 mm	1.2811	30.7 - 32.2 mm	17.6 ± 0.4	1.06 ± 0.05
26	Life	F, SP	85 mm	1.0102	32.9 - 34.8 mm	10.0 ± 0.3	0.63 ± 0.03
27	Lucky Strike	NF, SP	70 mm	0.9539	23 mm	27.8 ± 0.6	1.57 ± 0.02
28	Lucky Filters	F, SP	85 mm	1.0552	26.3 - 33.7 mm	20.3 ± 0.5	1.33 ± 0.05
	Lucky Filters	F, SP	100 mm	1.2249	32.3 - 34.2 mm	20.4 ± 0.5	1.39 ± 0.03
29	Mapleton	NF, SP	70 mm	0.9970	23 mm	26.6 ± 0.6	1.14 ± 0.02
	Mapleton	F, SP	85 mm	1.0572	27 - 28.9 mm	21.6 ± 0.5	0.97 ± 0.03
30	Marlboro	F, HP	80 mm	0.9960	25.3 - 26.7 mm	19.0 ± 0.4	1.27 ± 0.02
	Marlboro	F, SP	85 mm	1.0420	27.7 - 28.7 mm	20.3 ± 0.3	1.31 ± 0.04
	Marlboro	F, M, SP	85 mm	1.0626	27 - 28.8 mm	20.2 ± 0.5	1.33 ± 0.02
	Marlboro	F, SP	100 mm	1.1956	32.1 - 33.2 mm	21.3 ± 0.4	1.49 ± 0.02
	Marlboro	F, HP	100 mm	1.1477	32.8 - 34 mm	20.8 ± 0.4	1.41 ± 0.04

1 F= filter; NF= non-filter; M= menthol; HP= hard pack; SP= soft pack; HWP= hard wide pack; mm= millimeters; PB= plastic box

2 average weight reported in grams

3 range used for butt length because of variance of overwrap

4 TPM dry (tar)= milligrams total particulate matter less nicotine and water

5 milligrams total alkaloids reported as nicotine

6 limited availability based on reduced sampling from Washington, D.C. only

7 with and without holes smoked together

* tolerance shown is two (2) standard deviation of the mean

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"Tar"[4] and Nicotine[5] Content of One-hundred eighteen (118) Varieties of Domestic Cigarettes

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	Name	Type[1]		Average weight[2]	Butt length[3]	TPM dry[4]	Nicotine[5]
	Marvels	NF, SP	70 mm	0.9809	23 mm	17.4 ± 0.4	0.60 ± 0.02
	Marvels	F, SP	70 mm	0.9128	27.4 - 29.5 mm	2.9 ± 0.2	0.11 ± 0.01
31	Marvels	NF, SP	85 mm	1.1895	23 mm	23.2 ± 0.6	0.81 ± 0.02
	Marvels	F, SP	85 mm	1.1101	27 - 29 mm	5.3 ± 0.3	0.20 ± 0.01
	Marvels	F, M, SP	85 mm	1.1255	27.1 - 28.6 mm	4.1 ± 0.4	0.16 ± 0.01
32	Montclair	F, M, SP	85 mm	1.0168	26.3 - 28.1 mm	11.2 ± 0.5	0.83 ± 0.05
33	Multifilter[7]	F, PB	85 mm	1.1793	29 - 33.5 mm	15.6 ± 0.5	1.04 ± 0.05
	Multifilter	F, M, SP	85 mm	1.1840	29.1 - 34.1 mm	13.3 ± 1.0	0.92 ± 0.07
	Newport	F, M, HP	80 mm	0.9596	23 - 25 mm	18.8 ± 0.5	1.10 ± 0.04
34	Newport	F, M, SP	85 mm	1.0241	25.8 - 27.5 mm	19.4 ± 0.5	1.14 ± 0.04
	Newport	F, M, SP	100 mm	1.2151	32.5 - 34.5 mm	21.7 ± 0.5	1.31 ± 0.05
35	Oasis	F, M, SP	85 mm	1.0397	24.6 - 28 mm	18.0 ± 0.5	1.04 ± 0.03
	Old Gold Straights	NF, SP	70 mm	0.8307	23 mm	21.3 ± 0.5	1.21 ± 0.03
36	Old Gold Straights	NF, SP	85 mm	1.0013	23 mm	26.5 ± 0.5	1.56 ± 0.04
	Old Gold Filter	F, SP	85 mm	1.0104	26.1 - 28 mm	19.7 ± 0.5	1.17 ± 0.04
	Old Gold Filter	F, SP	100 mm	1.2055	32 - 33.5 mm	23.6 ± 0.6	1.48 ± 0.03
	Pall Mall	NF, SP	85 mm	1.1252	23 mm	28.3 ± 0.4	1.75 ± 0.03
37	Pall Mall	F, HWP	95 mm	1.0660	32.5 - 33.5 mm	18.9 ± 0.4	1.29 ± 0.03
	Pall Mall	F, M, HWP	95 mm	1.1103	32.5 - 34 mm	16.9 ± 0.5	1.05 ± 0.05
	Pall Mall	F, SP	100 mm	1.1728	31.9 - 34.2 mm	19.1 ± 0.4	1.29 ± 0.03
	Pall Mall	F, M, SP	100 mm	1.1413	32.6 - 34 mm	17.9 ± 0.4	1.27 ± 0.04
38	Parliament	F, HP	80 mm	1.0245	30 - 32 mm	15.7 ± 0.4	1.00 ± 0.02
	Parliament	F, SP	85 mm	1.0920	31.9 - 34.1 mm	16.1 ± 0.5	0.95 ± 0.05
39	Philip Morris	NF, SP	70 mm	0.9479	23 mm	23.4 ± 0.5	1.45 ± 0.05
	Philip Morris Commander	NF, SP	85 mm	1.1559	23 mm	28.5 ± 0.5	1.89 ± 0.04
40	Piccayune	NF, SP	70 mm	0.8804	23 mm	20.5 ± 0.5	1.54 ± 0.05
41	Piedmont	NF, SP	70 mm	0.9659	23 mm	24.3 ± 0.5	1.36 ± 0.03
42	Players	NF, HWP	70 mm	1.1140	23 mm	30.9 ± 0.6	2.09 ± 0.06
	Raleigh	NF, SP	85 mm	1.0798	23 mm	25.7 ± 0.5	1.63 ± 0.04
43	Raleigh	F, SP	85 mm	1.0326	26.9 - 28.7 mm	17.4 ± 0.4	1.18 ± 0.05
	Raleigh	F, SP	100 mm	1.1691	32.1 - 34.9 mm	17.7 ± 0.3	1.22 ± 0.04
44	Salem	F, M, SP	85 mm	1.0717	26.5 - 27.5 mm	20.0 ± 0.5	1.35 ± 0.05
	Salem	F, M, SP	100 mm	1.2715	32.4 - 33.1 mm	21.3 ± 0.3	1.46 ± 0.02
45	Sano	NF, SP	70 mm	1.0169	23 mm	15.4 ± 0.5	0.45 ± 0.02
	Sano	F, SP	70 mm	1.0532	26.5 - 27.6 mm	4.1 ± 0.3	0.14 ± 0.01
46	Silva Thins	F, SP	100 mm	1.0931	31.8 - 34 mm	16.1 ± 0.5	0.98 ± 0.03
	Silva Thins	F, M, SP	100 mm	1.0376	31.8 - 34 mm	15.9 ± 0.4	0.97 ± 0.03
47	Spring	F, M, SP	100 mm	1.2196	32.7 - 34.5 mm	20.9 ± 0.4	1.16 ± 0.03
	Stratford	NF, SP	85 mm	1.2298	23 mm	22.9 ± 0.5	0.90 ± 0.02
48	Stratford	F, SP	85 mm	1.0711	27.5 - 28.8 mm	16.9 ± 0.3	0.73 ± 0.03
	Stratford	F, M, SP	85 mm	1.0957	27.8 - 28.4 mm	19.3 ± 0.4	0.82 ± 0.01
49	Tareyton	F, SP	85 mm	1.0927	26 - 28.6 mm	17.4 ± 0.5	1.08 ± 0.04
	Tareyton	F, SP	100 mm	1.2344	32.5 - 34 mm	17.7 ± 0.4	1.16 ± 0.03
50	Tempo	F, SP	85 mm	1.0684	32.7 - 33.5 mm	12.0 ± 0.4	0.86 ± 0.03
51	True	F, SP	85 mm	1.0758	32.5 - 34.3 mm	12.5 ± 0.3	0.66 ± 0.01
	True	F, M, SP	85 mm	1.0045	32.8 - 34.5 mm	12.1 ± 0.4	0.63 ± 0.03
52	Viceroy	F, SP	85 mm	1.0324	27.3 - 28.5 mm	17.3 ± 0.4	1.19 ± 0.03
	Viceroy	F, SP	100 mm	1.1902	32 - 33.5 mm	19.6 ± 0.4	1.40 ± 0.04
53	Virginia Slims	F, SP	100 mm	1.0063	34.3 - 36.5 mm	18.3 ± 0.5	1.21 ± 0.04
	Virginia Slims	F, M, SP	100 mm	1.0168	33.5 - 35.3 mm	18.1 ± 0.5	1.17 ± 0.04
54	Vogue (black)	F, HWP	85 mm	1.1310	23 - 24.1 mm	21.7 ± 1.7	0.71 ± 0.05
	Vogue (colors)	F, HWP	85 mm	1.1370	23 - 23.8 mm	16.4 ± 1.2	0.54 ± 0.05
	Winston	F, HP	80 mm	1.0277	23.6 - 24.6 mm	20.2 ± 0.5	1.29 ± 0.04
55	Winston	F, SP	85 mm	1.0665	26.5 - 27.5 mm	20.2 ± 0.5	1.27 ± 0.04
	Winston	F, SP	100 mm	1.2586	32.2 - 33.9 mm	21.1 ± 0.4	1.43 ± 0.03
	Winston	F, M, SP	100 mm	1.2765	32.5 - 33.7 mm	21.6 ± 0.5	1.49 ± 0.03

1 F- filter; NF- non-filter; M- menthol; HP- hard pack; SP- soft pack; HWP- hard wide pack; mm- millimeters; PB- plastic box

2 average weight reported in grams

3 range used for butt length because of variance of overwrap

4 TPM dry (tar)- milligrams total particulate matter less nicotine and water

5 milligrams total alkaloids reported as nicotine

6 limited availability based on reduced sampling from Washington, D.C. only

7 with and without holes smoked together

* tolerance shown is two (2) standard deviation of the mean

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Tar[1] and Nicotine Content of One Hundred-eighteen (118) Varieties of Domestic Cigarettes
(shown in increasing order of tar values)

Brand	Type	Tar (mg/cig.)	Nicotine (mg/cig)
Carlton[2]	reg. size, filter	2	0.2
Marvels	reg. size, filter	3	0.1
Sano	reg. size, filter	4	0.1
Marvels	king size, filter, menthol	4	0.2
Carlton	king size, filter	4	0.3
Marvels	king size, filter	5	0.2
King Sano	king size, filter	5	0.2
King Sano	king size, filter, menthol	7	0.2
Kent	reg. size, filter	10	0.5
Duke	king size, filter	10	0.3
Life	king size, filter	10	0.6
Freppe	king size, filter, menthol	10	0.4
Montclair	king size, filter, menthol	11	0.8
Tempo	king size, filter	12	0.9
True	king size, filter, menthol	12	0.6
True	king size, filter	13	0.7
Multifilter	king size, filter, menthol	13	0.9
Doral	king size, filter	14	0.9
Doral	king size, filter, menthol	14	1.0
Sano	reg. size, non-filter	15	0.5
Multifilter	king size, filter, (plastic box)	16	1.0
Parliament	king size, filter, (hard pack)	16	1.0
Silva Thins	100 mm, filter, menthol	16	1.0
Kent	king size, filter	16	1.0
Parliament	king size, filter	16	1.0
Silva Thins	100 mm, filter	16	1.0
Kent	king size, filter, (hard pack)	16	1.0
Vogue (colors)	king size, filter, (hard pack)	16	0.5
L & M	reg. size, filter	17	0.9
Pall Mall	95 mm, filter, menthol, (hard pack)	17	1.1
Lark	king size, filter	17	1.0
Viceroy	king size, filter	17	1.2
Marvels	reg. size, non-filter	17	0.6
Raleigh	king size, filter	17	1.2
Tareyton	king size, filter	17	1.1
Kool	king size, filter, menthol	17	1.3
Domino	king size, filter, menthol	18	1.0
Lark	100 mm, filter	18	1.1
L & M	king size, filter, (hard pack)	18	1.0
Raleigh	100 mm, filter	18	1.2
Tareyton	100 mm, filter	18	1.2
Pall Mall	100 mm, filter, menthol	18	1.3
Oasis	king size, filter, menthol	18	1.0
Belair	king size, filter, menthol	18	1.4
Virginia Slims	100 mm, filter, menthol	18	1.2
DuMaurier	king size, filter, (hard pack)	18	1.3
Virginia Slims	100 mm, filter	18	1.2
Alpine	king size, filter, menthol	19	1.1
Chesterfield	king size, filter, menthol	19	1.1
Belair	100 mm, filter, menthol	19	1.4
Newport	king size, filter, menthol, (hard pack)	19	1.1
Stratford	king size, filter	19	0.7
Pall Mall	95 mm, filter, (hard pack)	19	1.3
L & M	100 mm, filter	19	1.1
Marlboro	king size, filter, (hard pack)	19	1.3
L & M	king size, filter	19	1.1
L & M	100 mm, filter, menthol	19	1.2
Pall Mall	100 mm, filter	19	1.3
Kent	100 mm, filter	19	1.2
Stratford	king size, filter, menthol	19	0.8
Newport	king size, filter, menthol	19	1.1
Benson & Hedges	reg. size, filter, (hard pack)	19	1.4
Viceroy	100 mm, filter	20	1.4
Kool	100 mm, filter, menthol	20	1.5
Old Gold Filter	king size, filter	20	1.2

[1] TPM dry (tar) = milligrams total particulate matter less nicotine and water

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Tar[1] and Nicotine Content of One Hundred-eighteen (118) Varieties of Domestic Cigarettes (shown in increasing order of tar values)

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Brand	Type	Tar (mg/cig)	Nicotine (mg/cig)
Home Run	reg. size, non-filter	20	1.5
Benson & Hedges	king size, filter, (hard pack)	20	1.4
Salem	king size, filter, menthol	20	1.4
Winston	king size, filter	20	1.3
Winston	king size, filter, (hard pack)	20	1.3
Marlboro	king size, filter, menthol	20	1.3
Marlboro	king size, filter	20	1.3
Camel	king size, filter	20	1.3
Benson & Hedges	100 mm, filter	20	1.4
Lucky Filters	king size, filter	20	1.3
Gauloises Disque Bleu	reg. size, filter	20	1.1
Century	100 mm, filter	20	1.3
Lucky Filters	100 mm, filter	20	1.4
Kool	reg. size, non-filter, menthol	20	1.3
Picayune	reg. size, non-filter	21	1.5
Galaxy	king size, filter	21	1.4
Benson & Hedges	100 mm, filter, menthol	21	1.4
Marlboro	100 mm, filter, (hard pack)	21	1.4
Spring	100 mm, filter, menthol	21	1.2
Winston	100 mm, filter	21	1.4
Domino	king size, filter	21	1.0
Newport	100 mm, filter, menthol	21	1.3
Chesterfield	king size, filter	21	1.4
Salem	100 mm, filter, menthol	21	1.5
Chesterfield	101 mm, filter	21	1.5
Marlboro	100 mm, filter	21	1.5
Old Gold Straights	reg. size, non-filter	21	1.2
Mapleton	king size, filter	22	1.0
Winston	100 mm, filter, menthol	22	1.5
Gauloises Caporal	reg. size, non-filter	22	1.1
Vogue (black)	king size, filter, (hard pack)	22	0.7
Stratford	king size, non-filter	23	0.9
Marvels	king size, non-filter	23	0.8
Philip Morris	reg. size, non-filter	23	1.5
Half & Half	king size, filter	23	1.6
Old Gold Filter	100 mm, filter	24	1.5
Piedmont	reg. size, non-filter	24	1.4
Domino	king size, non-filter	24	1.1
Chesterfield	reg. size, non-filter	25	1.4
Camel	reg. size, non-filter	25	1.5
Raleigh	king size, non-filter	26	1.6
English Ovals	reg. size, non-filter, (hard pack)	26	1.9
Old Gold Straights	king size, non-filter	27	1.6
Mapleton	reg. size, non-filter	27	1.1
Herbert Tareyton	king size, non-filter	27	1.6
Lucky Strike	reg. size, non-filter	28	1.6
Pall Mall	king size, non-filter	28	1.8
Bull Durham	king size, filter	28	1.7
Chesterfield	king size, non-filter	29	1.7
Philip Morris Commander	king size, non-filter	29	1.9
English Ovals	king size, non-filter, (hard pack)	29	2.2
Players	reg. size, non-filter, (hard pack)	31	2.1
Fatima	king size, non-filter	31	1.8

[1] TPM dry (tar) - milligrams total particulate matter less nicotine and water

1005045837

Source: https://www.industrydocuments.ucsf.edu/docs/rshl0000

Tar[1] and Nicotine Content of One Hundred-eighteen (118) Varieties
of Domestic Cigarettes
(shown in increasing order of nicotine values)

MAY 18 1970

Brand	Type	Tar (mg/cig)	Nicotine (mg/cig)
Marvels	reg. size, filter	3	0.1
Sano	reg. size, filter	4	0.1
Carlton[2]	reg. size, filter	2	0.2
Marvels	king size, filter, menthol	4	0.2
King Sano	king size, filter	5	0.2
Marvels	king size, filter	5	0.2
King Sano	king size, filter, menthol	7	0.2
Carlton	king size, filter	4	0.3
Duke	king size, filter	10	0.3
Frappe	king size, filter, menthol	10	0.4
Sano	reg. size, non-filter	15	0.5
Kent	reg. size, filter	10	0.5
Vogue (colors)	king size, filter, (hard pack)	16	0.5
Marvels	reg. size, non-filter	17	0.6
Life	king size, filter	10	0.6
True	king size, filter, menthol	12	0.6
True	king size, filter	13	0.7
Vogue (black)	king size, filter, (hard pack)	22	0.7
Stratford	king size, filter	19	0.7
Marvels	king size, non-filter	23	0.8
Stratford	king size, filter, menthol	19	0.8
Montclair	king size, filter, menthol	11	0.8
Tempo	king size, filter	12	0.9
Doral	king size, filter	14	0.9
Stratford	king size, non-filter	23	0.9
L & M	reg. size, filter	17	0.9
Multifilter	king size, filter, menthol	13	0.9
Kent	king size, filter	16	1.0
Doral	king size, filter, menthol	14	1.0
Parliament	king size, filter	16	1.0
Silva Thins	100 mm, filter, menthol	16	1.0
Mapleton	king size, filter	22	1.0
Kent	king size, filter, (hard pack)	16	1.0
Silva Thins	100 mm, filter	16	1.0
Domino	king size, filter, menthol	18	1.0
Parliament	king size, filter, (hard pack)	16	1.0
Lark	king size, filter	17	1.0
L & M	king size, filter, (hard pack)	18	1.0
Domino	king size, filter	21	1.0
Oasis	king size, filter, menthol	18	1.0
Multifilter	king size, filter, (plastic box)	16	1.0
Pall Mall	king size, filter, menthol, (hard pack)	17	1.1
Lark	100 mm, filter	18	1.1
Gauloises Caporal	reg. size, non-filter	22	1.1
Chesterfield	king size, filter, menthol	19	1.1
Tareyton	king size, filter	17	1.1
Gauloises Dieque Bleu	reg. size, filter	20	1.1
Newport	king size, filter, menthol, (hard pack)	19	1.1
L & M	100 mm, filter	19	1.1
Domino	king size, non-filter	24	1.1
L & M	king size, filter	19	1.1
Alpine	king size, filter, menthol	19	1.1
Mapleton	reg. size, non-filter	27	1.1
Newport	king size, filter, menthol	19	1.1
Tareyton	100 mm, filter	18	1.2
Kent	100 mm, filter	19	1.2
Spring	100 mm, filter, menthol	21	1.2
Virginia Slims	100 mm, filter, menthol	18	1.2
Old Gold Filter	king size, filter	20	1.2
L & M	100 mm, filter, menthol	19	1.2
Raleigh	king size, filter	17	1.2
Viceroy	king size, filter	17	1.2
Old Gold Straights	reg. size, non-filter	21	1.2
Virginia Slims	100 mm, filter	18	1.2
Raleigh	100 mm, filter	18	1.2

1 Tar dry (tar) - milligrams total particulate matter less nicotine and water
2 limited availability based on reduced sampling from Washington, D.C. only

1005045838

Source: https://www.industrydocuments.ucsf.edu/docs/rshl0000

Tar[1] and Nicotine Content of One Hundred-eighteen (118) Varieties of Domestic Cigarettes
(shown in increasing order of nicotine values)

Brand	Type	Tar (mg/cig)	Nicotine (mg/cig)
DuMaurier	king size, filter, (hard pack)	18	1.3
Marlboro	king size, filter, (hard pack)	19	1.3
Pall Mall	100 mm, filter, menthol	16	1.3
Winston	king size, filter	20	1.3
Century	100 mm, filter	20	1.3
Pall Mall	95 mm, filter, (hard pack)	19	1.3
Pall Mall	100 mm, filter	19	1.3
Camel	king size, filter	20	1.3
Winston	king size, filter, (hard pack)	20	1.3
Marlboro	king size, filter	20	1.3
Kool	reg. size, non-filter, menthol	20	1.3
Newport	100 mm, filter, menthol	21	1.3
Marlboro	king size, filter, menthol	20	1.3
Kool	king size, filter, menthol	17	1.3
Lucky Filters	king size, filter	20	1.3
Belair	king size, filter, menthol	18	1.4
Salem	king size, filter, menthol	20	1.4
Belair	100 mm, filter, menthol	19	1.4
Benson & Hedges	100 mm, filter, menthol	21	1.4
Piedmont	reg. size, non-filter	24	1.4
Benson & Hedges	100 mm, filter	20	1.4
Benson & Hedges	reg. size, filter, (hard pack)	19	1.4
Lucky Filters	100 mm, filter	20	1.4
Chesterfield	reg. size, non-filter	25	1.4
Galaxy	king size, filter	21	1.4
Viceroy	100 mm, filter	20	1.4
Marlboro	100 mm, filter, (hard pack)	21	1.4
Chesterfield	king size, filter	21	1.4
Winston	100 mm, filter	21	1.4
Benson & Hedges	king size, filter, (hard pack)	20	1.4
Kool	100 mm, filter, menthol	20	1.5
Real Fun	reg. size, non-filter	20	1.5
Philip Morris	reg. size, non-filter	23	1.5
Salem	100 mm, filter, menthol	21	1.5
Chesterfield	100 mm, filter	21	1.5
Old Gold Filter	100 mm, filter	24	1.5
Marlboro	100 mm, filter	21	1.5
Winston	100 mm, filter, menthol	22	1.5
Camel	reg. size, non-filter	25	1.5
Picayune	reg. size, non-filter	21	1.5
Old Gold Straights	king size, non-filter	27	1.6
Lucky Strike	reg. size, non-filter	28	1.6
Half & Half	king size, filter	23	1.6
Herbert Tareyton	king size, non-filter	27	1.6
Raleigh	king size, non-filter	26	1.6
Chesterfield	king size, non-filter	29	1.7
Bull Durham	king size, filter	28	1.7
Pall Mall	king size, non-filter	28	1.8
Fatima	king size, non-filter	31	1.8
Philip Morris Commander	king size, non-filter	29	1.9
English Ovals	reg. size, non-filter, (hard pack)	26	1.9
Players	reg. size, non-filter, (hard pack)	31	2.1
English Ovals	king size, non-filter, (hard pack)	29	2.2

[1] TPM dry (tar) - milligrams total particulate matter less nicotine and water

1005045839

Source: https://www.industrydocuments.ucsf.edu/docs/rshl0000

Listing of "Tar"[1] Values for Five (5) Testing Periods

Brand	Type	Oct., 1968	Feb., 1969	July, 1969	Nov., 1969	May, 1970
Alpine	king size, filter, menthol	20	20	20	19	19
Belair	king size, filter, menthol	19	19	19	18	18
Belair	100 mm, filter, menthol	*	*	*	*	19
Benson & Hedges	reg. size, filter, (hard pack)	21	20	20	20	19
Benson & Hedges	king size, filter, (hard pack)	20	21	20	20	20
Benson & Hedges	100 mm, filter	21	21	21	20	20
Benson & Hedges	100 mm, filter, menthol	21	21	22	21	21
Bull Durham	king size, filter	30	29	29	29	28
Camel	reg. size, non-filter	26	26	25	25	25
Camel	king size, filter	21	21	21	21	20
Carlton	reg. size, filter	*	*	*	*	2
Carlton	king size, filter	4	5	4	5	4
Cascade	king size, filter, menthol	7	8	*	*	*
Century	100 mm, filter	24	23	22	21	20
Chesterfield	reg. size, non-filter	25	25	25	24	25
Chesterfield	king size, non-filter	30	29	30	29	29
Chesterfield	king size, filter	22	23	22	21	21
Chesterfield	king size, filter, menthol	21	21	20	19	19
Chesterfield	101 mm, filter	21	21	20	21	21
Colony	100 mm, filter	28	29	*	*	*
Colony	100 mm, filter, menthol	26	26	*	*	*
Domino	king size, non-filter	26	25	26	25	24
Domino	king size, filter	21	22	21	21	21
Domino	king size, filter, menthol	14	14	16	16	18
Doral	king size, filter	*	*	*	15	14
Doral	king size, filter, menthol	*	*	*	14	14
Duke of Durham	king size, filter	11	10	10	10	10
Dutchmaster	king size, filter, (hard pack)	19	18	18	18	18
English Ovals	reg. size, non-filter, (hard pack)	28	27	28	28	26
English Ovals	king size, non-filter, (hard pack)	36	36	35	31	29
Fatima	king size, non-filter	33	33	32	32	31
Frappe	king size, filter, menthol	8	10	11	10	10
Galaxy	king size, filter	21	21	21	20	21
Gauloises Caporal	reg. size, non-filter	25	25	26	24	22
Gauloises Disque Bleu	reg. size, filter	22	23	21	21	20
Half & Half	king size, filter	25	24	23	22	23
Helmar	king size, filter, (hard pack)	25	25	*	*	*
Herbert Tareyton	king size, non-filter	31	31	29	27	27
Holiday	king size, non-filter	34	35	32	31	*
Holiday	king size, filter	26	27	25	25	*
Home Run	reg. size, non-filter	21	20	20	19	20
Kent	reg. size, filter	15	12	10	10	10
Kent	king size, filter, (hard pack)	17	18	17	17	16
Kent	king size, filter	17	17	17	16	16
Kent	100 mm, filter	19	20	18	19	19
King Sano	king size, filter	7	7	7	7	5
King Sano	king size, filter, menthol	10	8	8	7	7
Kool	reg. size, non-filter, menthol	23	22	21	21	20
Kool	king size, filter, menthol	19	19	19	18	17
Kool	100 mm, filter, menthol	20	21	21	20	20
Lark	king size, filter	18	18	18	17	17
Lark	100 mm, filter	*	19	19	18	18
Life	king size, filter	11	11	11	11	10
L & M	reg. size, filter	17	18	18	17	17
L & M	king size, filter, (hard pack)	18	19	18	18	18
L & M	king size, filter	19	20	20	19	19
L & M	100 mm, filter	21	20	19	19	19
L & M	100 mm, filter, menthol	20	20	20	19	19
Lucky Strike	reg. size, non-filter	28	29	28	28	28
Lucky Filters	king size, filter	22	21	22	21	20
Lucky Filters	king size, filter, menthol	20	20	20	*	*
Lucky Filters	100 mm, filter	21	21	21	20	20
Lucky Filters	100 mm, filter, menthol	19	19	18	*	*
Mapleton	reg. size, non-filter	23	24	24	26	27
Mapleton	king size, filter	21	21	22	22	22
Marlboro	king size, filter, (hard pack)	20	21	20	19	19
Marlboro	king size, filter	21	22	21	20	20
Marlboro	king size, filter, menthol	20	21	21	21	20
Marlboro	100 mm, filter	22	23	22	21	21
Marlboro	100 mm, filter, (hard pack)	22	22	21	21	21

[1] TPM dry (tar) - milligrams total particulate matter less nicotine and water

* Denotes varieties not available during market sampling

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Source: https://www.industrydocuments.ucsf.edu/docs/rshl0000

Listing of "Tar"[1] Values for Five (5) Testing Periods

Brand	Type	Oct., 1968	Feb., 1969	July, 1969	Nov., 1970	May, 1971
Marvels	reg. size, non-filter	19	19	18	20	17
Marvels	reg. size, filter	4	4	3	4	3
Marvels	king size, non-filter	23	25	24	24	23
Marvels	king size, filter	7	7	6	6	5
Marvels	king size, filter, menthol	6	5	5	4	4
Montclair	king size, filter, menthol	9	11	9	9	11
Multifilter	king size, filter, (plastic box)	*	*	*	*	16
Multifilter	king size, filter, menthol	*	*	*	*	13
Newport	king size, filter, menthol, (hard pack)	21	21	20	19	19
Newport	king size, filter, menthol	21	21	21	20	19
Newport	100 mm, filter, menthol	22	21	22	21	21
Oasis	king size, filter, menthol	20	21	19	19	18
Old Gold Straights	reg. size, non-filter	23	23	23	22	21
Old Gold Straights	king size, non-filter	29	29	28	27	27
Old Gold Filter	king size, filter	21	21	21	20	20
Old Gold Filter	100 mm, filter	*	*	*	24	24
Omar	reg. size, non-filter	30	30	*	*	*
Pall Mall	king size, non-filter	25	29	28	25	28
Pall Mall	95 mm, filter, (hard pack)	19	19	19	19	18
Pall Mall	95 mm, filter, menthol, (hard pack)	19	19	18	17	17
Pall Mall	100 mm, filter	20	20	19	19	19
Pall Mall	100 mm, filter, menthol	19	19	17	18	18
Parliament	king size, filter, (hard pack)	16	16	16	16	16
Parliament	king size, filter	16	17	16	16	16
Philip Morris	reg. size, non-filter	25	25	25	24	23
Philip Morris Commander	king size, non-filter	31	32	30	29	29
Philip Morris	king size, filter	19	19	19	19	*
Philip Morris	king size, filter, menthol	20	20	20	15	*
Picayune	reg. size, non-filter	19	21	21	20	21
Piedmont	reg. size, non-filter	26	25	25	24	24
Players	reg. size, non-filter, (hard pack)	31	32	32	31	31
Raleigh	king size, non-filter	30	30	28	25	26
Raleigh	king size, filter	19	19	19	18	17
Raleigh	100 mm, filter	*	*	*	*	18
Salem	king size, filter, menthol	21	21	20	20	20
Salem	100 mm, filter, menthol	22	22	21	21	21
Sano	reg. size, non-filter	17	17	14	14	15
Sano	reg. size, filter	*	4	4	*	4
Silva Thins	100 mm, filter	15	15	15	16	16
Silva Thins	100 mm, filter, menthol	*	15	16	16	16
Spring	100 mm, filter, menthol	20	21	21	21	21
Stratford	king size, non-filter	24	26	25	24	23
Stratford	king size, filter	19	20	19	18	19
Stratford	king size, filter, menthol	19	21	21	19	19
Sweet Caporal	king size, filter	23	23	*	*	*
Tareyton	king size, filter	17	18	17	16	17
Tareyton	100 mm, filter	18	18	16	17	18
Tempo	king size, filter	17	14	13	12	12
True	king size, filter	13	13	12	13	13
True	king size, filter, menthol	13	13	12	12	12
Tryon	king size, filter	13	12	*	12	*
Tryon	king size, filter, menthol	11	11	11	11	*
Viceroy	king size, filter	18	20	19	18	17
Viceroy	100 mm, filter	19	21	20	19	20
Virginia Slims	100 mm, filter	*	18	18	18	18
Virginia Slims	100 mm, filter, menthol	*	19	18	18	18
Vogue (black)	king size, filter, (hard pack)	19	20	18	20	22
Vogue (colors)	king size, filter, (hard pack)	12	13	13	13	16
Winge	king size, filter	21	20	*	*	*
Winston	king size, filter, (hard pack)	21	22	21	21	20
Winston	king size, filter	21	21	21	21	20
Winston	100 mm, filter	22	22	21	21	21
Winston	100 mm, filter, menthol	22	22	21	21	22
Winston	100 mm, filter, (hard pack)	21	*	*	*	*
Yukon	king size, filter, menthol	20	20	20	20	*

[1] Tar dry (tar) - milligrams total particulate matter less nicotine and water

* Denotes varieties not available during market sampling

1005045841

Source: https://www.industrydocuments.ucsf.edu/docs/rshl0000

Listing of Nicotine Values for Five (5) Testing Periods

Brand	Type	Oct., 1968	Feb., 1969	July 1969	Nov., 1969	May 1970
Alpine	king size, filter, menthol	1.2	1.3	1.3	1.3	1.1
Belair	king size, filter, menthol	1.5	1.6	1.5	1.5	1.4
Belair	100 mm, filter, menthol	*	*	*	*	1.4
Benson & Hedges	reg. size, filter, (hard pack)	1.3	1.4	1.4	1.4	1.4
Benson & Hedges	king size, filter, (hard pack)	1.4	1.5	1.5	1.5	1.4
Benson & Hedges	100 mm, filter	1.3	1.5	1.5	1.4	1.4
Benson & Hedges	100 mm, filter, menthol	1.4	1.5	1.5	1.4	1.4
Bull Luther	king size, filter	1.7	1.9	1.9	1.8	1.7
Camel	reg. size, non-filter	1.4	1.6	1.6	1.6	1.5
Camel	king size, filter	1.3	1.3	1.4	1.4	1.3
Carlton	reg. size, filter	*	*	*	*	0.2
Carlton	king size, filter	0.3	0.4	0.3	0.4	0.3
Cascade	king size, filter, menthol	0.2	0.3	*	*	*
Century	100 mm, filter	1.4	1.5	1.4	1.3	1.3
Chesterfield	reg. size, non-filter	1.2	1.4	1.4	1.3	1.4
Chesterfield	king size, non-filter	1.5	1.6	1.7	1.6	1.7
Chesterfield	king size, filter	1.3	1.5	1.5	1.4	1.4
Chesterfield	king size, filter, menthol	1.2	1.2	1.2	1.1	1.1
Chesterfield	101 mm, filter	1.2	1.3	1.3	1.5	1.5
Colony	100 mm, filter	1.6	1.8	*	*	*
Colony	100 mm, filter, menthol	1.3	1.4	*	*	*
Domino	king size, non-filter	1.0	1.1	1.2	1.1	1.1
Domino	king size, filter	0.8	1.0	1.0	1.0	1.0
Domino	king size, filter, menthol	0.7	0.7	0.9	0.9	1.0
Doral	king size, filter	*	*	*	1.0	0.5
Doral	king size, filter, menthol	*	*	*	1.0	1.0
Duke of Durham	king size, filter	0.4	0.4	0.4	0.4	0.3
DuMaurier	king size, filter, (hard pack)	1.3	1.5	1.4	1.4	1.3
English Ovals	reg. size, non-filter, (hard pack)	1.8	1.9	2.1	2.1	1.9
English Ovals	king size, non-filter, (hard pack)	2.3	2.6	2.7	2.5	2.2
Fatima	king size, non-filter	1.8	1.9	1.9	1.9	1.8
Frappe	king size, filter, menthol	0.3	0.3	0.4	0.4	0.4
Galaxy	king size, filter	1.4	1.5	1.5	1.5	1.4
Goulaises Caporal	reg. size, non-filter	1.2	1.3	1.3	1.2	1.1
Goulaises Bleue Bleu	reg. size, filter	1.1	1.3	1.2	1.2	1.1
Half & Half	king size, filter	1.7	1.7	1.6	1.5	1.6
Helmar	king size, filter, (hard pack)	1.5	1.5	*	*	*
Herbert Tareyton	king size, non-filter	1.7	1.8	1.7	1.6	1.6
Holiday	king size, non-filter	1.9	2.1	2.2	1.9	*
Holiday	king size, filter	1.6	1.7	1.8	1.6	*
Home Run	reg. size, non-filter	1.5	1.7	1.6	1.5	1.5
Kent	reg. size, filter	0.8	0.7	0.6	0.6	0.5
Kent	king size, filter, (hard pack)	1.0	1.1	1.1	1.1	1.0
Kent	king size, filter	1.0	1.1	1.1	1.0	1.0
Kent	100 mm, filter	1.2	1.3	1.2	1.2	1.2
King Sano	king size, filter	0.2	0.3	0.3	0.2	0.2
King Sano	king size, filter, menthol	0.3	0.3	0.3	0.2	0.2
Kool	reg. size, non-filter, menthol	1.7	1.6	1.7	1.5	1.3
Kool	king size, filter, menthol	1.4	1.6	1.6	1.5	1.3
Kool	100 mm, filter, menthol	1.5	1.6	1.7	1.5	1.5
Lark	king size, filter	1.0	1.2	1.1	1.1	1.0
Lark	100 mm, filter	*	1.3	1.3	1.1	1.1
Life	king size, filter	0.7	0.7	0.7	0.7	0.6
L & M	reg. size, filter	0.9	1.0	1.0	1.0	0.9
L & M	king size, filter, (hard pack)	1.0	1.1	1.1	1.1	1.0
L & M	king size, filter	1.1	1.2	1.2	1.1	1.1
L & M	100 mm, filter	1.2	1.2	1.2	1.1	1.1
L & M	100 mm, filter, menthol	1.2	1.3	1.3	1.2	1.2
Lucky Strike	reg. size, non-filter	1.5	1.7	1.6	1.6	1.6
Lucky Filters	king size, filter	1.2	1.4	1.4	1.4	1.3
Lucky Filters	king size, filter, menthol	1.1	1.1	1.2	*	*
Lucky Filters	100 mm, filter	1.2	1.4	1.4	1.4	1.4
Lucky Filters	100 mm, filter, menthol	1.0	1.1	1.1	*	*
Mapleton	reg. size, non-filter	0.8	0.9	0.9	1.1	1.1
Mapleton	king size, filter	0.8	0.9	1.0	1.0	1.0
Marlboro	king size, filter, (hard pack)	1.4	1.4	1.4	1.3	1.3
Marlboro	king size, filter	1.4	1.5	1.4	1.4	1.3
Marlboro	king size, filter, menthol	1.3	1.4	1.4	1.4	1.3
Marlboro	100 mm, filter	1.5	1.6	1.6	1.5	1.5
Marlboro	100 mm, filter, (hard pack)	1.5	1.5	1.6	1.5	1.4

* Denotes varieties not available during market sampling

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Source: https://www.industrydocuments.ucsf.edu/docs/rshl0000

Listing of Nicotine Values for Five (5) Testing Periods

Brand	Type	Oct., 1968	Feb., 1969	July, 1969	Nov., 1969	May, 1970
Marvels	reg. size, non-filter	0.6	0.7	0.6	0.7	0.6
Marvels	reg. size, filter	0.1	0.1	0.1	0.1	0.1
Marvels	king size, non-filter	0.8	0.9	0.9	0.9	0.8
Marvels	king size, filter	0.3	0.3	0.2	0.2	0.2
Marvels	king size, filter, menthol	0.2	0.2	0.2	0.2	0.2
Montclair	king size, filter, menthol	0.6	0.7	0.7	0.7	0.8
Multifilter	king size, filter, (plastic box)	*	*	*	*	1.0
Multifilter	king size, filter, menthol	*	*	*	*	0.9
Newport	king size, filter, menthol, (hard pack)	1.3	1.4	1.3	1.2	1.1
Newport	king size, filter, menthol	1.4	1.3	1.3	1.2	1.1
Newport	100 mm, filter, menthol	1.4	1.4	1.4	1.3	1.3
Oasis	king size, filter, menthol	1.1	1.2	1.2	1.1	1.0
Old Gold Straights	reg. size, non-filter	1.3	1.4	1.4	1.3	1.2
Old Gold Straights	king size, non-filter	1.7	1.8	1.8	1.6	1.6
Old Gold Filters	king size, filter	1.2	1.2	1.3	1.2	1.2
Old Gold Filters	100 mm, filter	*	*	*	1.5	1.5
Omar	reg. size, non-filter	1.6	1.7	*	*	*
Pall Mall	king size, non-filter	1.6	1.7	1.7	1.8	1.8
Pall Mall	95 mm, filter, (hard pack)	1.2	1.2	1.3	1.2	1.3
Pall Mall	95 mm, filter, menthol, (hard pack)	1.1	1.1	1.2	1.1	1.1
Pall Mall	100 mm, filter	1.3	1.3	1.3	1.3	1.3
Pall Mall	100 mm, filter, menthol	1.2	1.2	1.2	1.2	1.3
Parliament	king size, filter, (hard pack)	1.0	1.1	1.1	1.0	1.0
Parliament	king size, filter	1.1	1.1	1.1	1.1	1.0
Philip Morris	reg. size, non-filter	1.6	1.6	1.6	1.6	1.5
Philip Morris Commander	king size, non-filter	2.0	2.1	2.0	1.9	1.9
Philip Morris	king size, filter	1.3	1.4	1.4	1.4	*
Philip Morris	king size, filter, menthol	1.3	1.5	1.5	1.1	*
Picayune	reg. size, non-filter	1.5	1.7	1.8	1.6	1.5
Piedmont	reg. size, non-filter	1.4	1.4	1.5	1.4	1.4
Players	reg. size, non-filter, (hard pack)	1.8	2.0	2.1	2.1	2.1
Raleigh	king size, non-filter	2.1	2.2	2.1	1.7	1.6
Raleigh	king size, filter	1.4	1.5	1.5	1.3	1.2
Raleigh	100 mm, filter	*	*	*	*	1.2
Salem	king size, filter, menthol	1.4	1.4	1.4	1.4	1.4
Salem	100 mm, filter, menthol	1.5	1.5	1.5	1.5	1.5
Sano	reg. size, non-filter	0.5	0.5	0.5	0.5	0.5
Sano	reg. size, filter	*	0.2	0.2	*	0.1
Silva Thins	100 mm, filter	0.9	0.9	0.9	0.9	1.0
Silva Thins	100 mm, filter, menthol	*	0.9	0.9	1.0	1.0
Spring	100 mm, filter, menthol	1.1	1.2	1.2	1.2	1.2
Stratford	king size, non-filter	0.8	1.1	1.0	1.0	0.9
Stratford	king size, filter	0.7	0.7	0.7	0.7	0.7
Stratford	king size, filter, menthol	0.7	0.8	0.8	0.8	0.8
Sweet Caporal	king size, filter	1.3	1.4	*	*	*
Tareyton	king size, filter	1.1	1.1	1.0	1.0	1.1
Tareyton	100 mm, filter	1.0	1.1	1.0	1.1	1.2
Tempo	king size, filter	0.8	0.8	0.8	0.8	0.9
True	king size, filter	0.7	0.7	0.7	0.7	0.7
True	king size, filter, menthol	0.7	0.7	0.6	0.7	0.6
Tryon	king size, filter	0.9	0.9	*	0.9	*
Tryon	king size, filter, menthol	0.7	0.8	0.8	0.7	*
Viceroy	king size, filter	1.4	1.5	1.5	1.3	1.2
Viceroy	100 mm, filter	1.5	1.5	1.6	1.5	1.4
Virginia Slims	100 mm, filter	*	1.3	1.3	1.2	1.2
Virginia Slims	100 mm, filter, menthol	*	1.4	1.3	1.2	1.2
Vogue (black)	king size, filter, (hard pack)	0.6	0.6	0.6	0.7	0.7
Vogue (colors)	king size, filter, (hard pack)	0.4	0.4	0.4	0.5	0.5
Winge	king size, filter	1.6	1.5	*	*	*
Winston	king size, filter, (hard pack)	1.3	1.4	1.3	1.4	1.3
Winston	king size, filter	1.3	1.3	1.4	1.4	1.3
Winston	100 mm, filter	1.5	1.6	1.5	1.5	1.4
Winston	100 mm, filter, menthol	1.5	1.6	1.5	1.5	1.5
Winston	100 mm, filter, (hard pack)	1.5	*	*	*	*
Yukon	king size, filter, menthol	0.8	0.8	0.8	0.9	*

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